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REMARKS

In response to the Official Office Action dated September 29, 2006 the Applicant offers the following remarks. The Examiner has stated and the Applicant acknowledges that claims 1-53 and 64-74 are pending. The Applicant wishes to thank the Examiner for his diligence in examination of this application.

Turning to paragraph 3 of the Official Office Action the Examiner has objected to claim 41 under 37 C.F.R. §1.75(d)(1) as reciting features that are not supported by the "description" of the specification. The Applicant wishes to point the Examiner specifically to Figs. 14-17 and to paragraphs [0119] through [0127] where the features of claim 41 are explicitly depicted and described, respectively, in excruciating detail. Additionally, the Applicant once again respectfully points out that claim 41 is an originally presented claim, therefore, as discussed in MPEP §608.01(l) the Applicant may rely upon the content as forming a part of the original specification. Understanding this portion of the specification is paramount for appreciating the present invention as recited in many of the pending claims.

Turning to paragraph 4 of the Official Office Action the Examiner has rejected claims 4-19 and 64 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Applicant respectfully submits that the concept of having "at least one output of said neural network comprises at least three states" is described in excruciating detail specifically with regard to Figs. 14-17 in paragraphs [0119] through [0127]; once again, it is paramount that this portion of the specification is understood to appreciate the present invention. The Applicant, therefore, requests that this rejection be removed.

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Turning to paragraph 5 of the Official Office Action the Examiner has rejected claims 10 and 11 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Applicant respectfully submits that the amendments made to the respective claims via this paper obviate this rejection, therefore, the Applicant requests that this rejection be removed.

As an initial matter of fact, the article entitled "Learned Classification of Sonar Targets Using a Massively Parallel Network" by Gorman et al. ("Gorman") pointed out by the Examiner as being incorporated in U.S. Patent 6,393,133, to Breed et al., is completely irrelevant in respect to the present invention. The Gorman article discusses at length classification of sonar targets for the purpose of identifying sub-surface geological characteristics. The Gorman article, in stark contrast, does not even purport to teach the fundamentals of neural networks or probability functions, let alone, how one of ordinary skill in the art would implement either for the purpose of automatic vehicle exterior light control.

Turning to paragraph 6 of the Official Office Action, the Examiner has rejected claims 1-3, 40, 42, 44-53, 65-69, 71 and 74 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,393,133, to Breed et al. For at least the reasons expressed above, the Applicant respectfully submits that Breed et al. does not teach, suggest or provide motivation for an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of a classification network, said controller is further configured to execute a first algorithm

comprising at least one second algorithm selected from the group comprising: an on state to off state transition state algorithm and an off state to on state transition state algorithm, wherein the classification network is trained using light sources classified using expert knowledge as recited in claim 1. In that claims 2 and 3 depend from claim 1, the Applicant respectfully submits that claims 1-3 are patentable over Breed et al.

Additionally, for at least the reasons expressed above the Applicant respectfully submits that Breed et does not teach, suggest or provide motivation for an automatic vehicular exterior light control, comprising: a controller configured to generate an exterior light control signal, said controller is further configured to execute a first algorithm comprising at least one second algorithm selected from the group comprising: an on state to off state transition state algorithm and an off state to on state transition state algorithm as recited in claim 40. In that claim 42 depends from claim 40, the Applicant respectfully submits that claims 40 and 42 are patentable over Breed et al.

Furthermore, for at least the reasons expressed above the Applicant respectfully submits that Breed et al. does not teach, suggest or provide motivation for an automatic vehicular exterior light control comprising a method of classifying detected light sources, said method comprising the steps of: classifying at least one detected light source with a classification network, wherein an output of said classification network is a likelihood that said detected light source is a headlamp of an oncoming vehicle or a tail lamp of a leading vehicle, wherein said output comprises at least three states as recited in claim 44. In that claims 45 and 46 depend from claim 44, the Applicant respectfully submits that claims 44-46 are patentable over Breed et al.

Yet furthermore, for at least the reasons expressed above the Applicant respectfully submits that Breed et al. does not teach, suggest or provide motivation for an automatic vehicular exterior light control comprising a method of classifying detected light sources, said method comprising the steps of: classifying at least one detected light source with a classification network, wherein said classification network determines the type of light source detected based upon at least one characteristic of at least one previously classified light source verified to be accurately classified by examining statistical data, wherein said statistical data is derived from a plurality of Images containing known light sources as recited in claim 47. In that claims 48 and 49 depend from claim 47, the Applicant respectfully submits that claims 47-49 are patentable over Breed et al.

Even further, for at least the reasons expressed above the Applicant respectfully submit that Breed et al. does not teach, suggest or provide motivation for an automatic vehicular exterior light control comprising a method of classifying detected light sources, said method comprising the steps of: classifying at least one detected light source with a trainable classification network, wherein said classification network is trained using at least one light source classified using expert knowledge by examining statistical data, wherein said statistical data is derived from a plurality of images containing known light sources as recited in claim 50. In that claims 51-53 depend from claim 50, the Applicant respectfully submits that claims 50-53 are patentable over Breed et al.

Yet even further, for at least the reasons expressed above the Applicant respectfully submit that Breed et al. does not teach, suggest or provide motivation for an

automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of a classification network comprising at least one weighting factor established by examining statistical data, wherein said statistical data is derived from a plurality of images containing known light sources as recited in claim 65. In that claims 66-68 depend from claim 65, the Applicant respectfully submits that claims 65-68 are patentable over Breed et al.

Still further, for at least the reasons expressed above the Applicant respectfully submit that Breed et al. does not teach, suggest or provide motivation for an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of at least one classification network, wherein said at least one classification network comprises at least one weighting factor established by examining statistical data, wherein said statistical data is derived from a plurality of images containing known light sources and a substantially continuous output value indicative of a probability as recited in claim 69. Therefore, the Applicant respectfully submits that claim 69 is patentable over Breed et al.

Even furthermore, for at least the reasons expressed above the Applicant respectfully submit that Breed et al. does not teach, suggest or provide motivation for an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of at least one classification network, wherein said at least one classification network comprises at least one variable, at least one weighting factor established by examining statistical data wherein said statistical data is derived from a plurality of images containing known light sources

and at least one output as recited in claim 71. Therefore, the Applicant respectfully submits that claim 71 is patentable over Breed et al.

Yet even further, for at least the reasons expressed above the Applicant respectfully submit that Breed et al. does not teach, suggest or provide motivation for an automatic vehicular exterior light control comprising a method of classifying detected light sources, said method comprising the steps of: classifying at least one detected light source with a classification network, wherein an output of said classification network is a likelihood that said detected light source is a headlamp of an oncoming vehicle or a tail lamp of a leading vehicle wherein said classification network comprises at least one weighting factor established by examining statistical data, wherein said statistical data is derived from a plurality of images containing known light sources as recited in claim 74. Therefore, the Applicant respectfully submits that claim 74 is patentable over Breed et al.

Turning to paragraph 7 of the Official Office Action the Examiner has rejected claims 20, 24, 25, 27, 28 and 35-39 under 35 U.S.C. §103(a) as being unpatentable over the combination of Breed et al. and U.S. Patent Application Publication No. 2004/0032981, to Ii et al. For at least the reasons expressed above, the Applicant respectfully submits that Breed et al., Ii et al. or the combination do not teach, suggest or provide motivation for an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of at least one probability function, wherein said at least one probability function comprises a plurality of variables and a substantially continuous output value having at least three

states indicative of a probability as recited in claim 20. In that claims 24, 25 and 27 depend from claim 20 the Applicant respectfully submits that claims 20, 24, 25 and 27 are patentable over Breed et al. and li et al.

Additionally, for at least the reasons expressed above, the Applicant respectfully submits that Breed et al., li et al. or the combination do not teach, suggest or provide motivation for an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of at least one probability function, wherein said at least one probability function comprises a plurality of variables, a plurality of weighting factors and an output, wherein said output comprises at least three states as recited in claim 28. In that claims 35-39 depend from claim 28 the Applicant respectfully submits that claims 28 and 35-39 are patentable over Breed et al. and li et al.

Turning to paragraph 8 of the Official Office Action the Examiner has rejected claim 26 under 35 U.S.C. §103(a) as being unpatentable over the combination of Breed et al., li et al. and U.S. Patent 6,049,171, to Stam et al. For at least the reasons expressed above with regard to independent claim 20 and in that claim 26 depends from claim 20, the Applicant respectfully submits that claim 26 is patentable over Breed et al., li et al. and Stam et al.

Turning to paragraph 9 of the Official Office Action the Examiner has rejected claims 43, 70, 72 and 73 under 35 U.S.C. §103(a) as being unpatentable over the combination of Breed et al. and Stam et al. For at least the reasons expressed above with regard to independent claim 40 and in that claim 43 depends from claim 40, the

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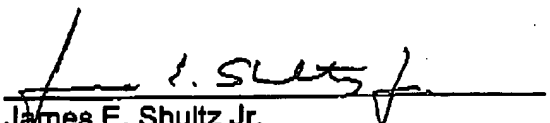
Applicant respectfully submits that claim 43 is patentable over Breed et al. and Stam et al. Additionally, for at least the reasons expressed above with regard to independent claim 69 and in that claim 70 depends from claim 69, the Applicant respectfully submits that claim 70 is patentable over Breed et al. and Stam et al. Furthermore, for at least the reasons expressed above with regard to independent claim 71 and in that claims 72 and 73 depend from claim 71, the Applicant respectfully submits that claims 72 and 73 are patentable over Breed et al. and Stam et al.

The Applicant respectfully submits that no new subject matter was added via this paper. The Applicant, therefore, respectfully submits that claims 1-53 and 64-74 are in condition for allowance. In view of the foregoing remarks, the Applicant submits that the present invention, as defined in the pending claims, is allowable over the prior art of record. The Examiner's reconsideration and timely allowance of the claims is requested. A Notice of Allowance is, therefore, respectfully solicited. Please contact the undersigned should additional information be required.

Respectfully submitted,
JOSEPH S. STAM ET AL.
By: Gentex Corporation

November 28, 2006
Date



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